

THE

Latter-day Saints' Millennial Star.

He that hath an ear, let him hear what the Spirit saith unto the churches.—Jesus Christ.

Come out of her, my people, that ye be not partakers of her sins, and that ye receive not of her plagues.—A Voice from Heaven.

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Saturday, December 15, 1855.

Price One Penny.

Good and Evil.

The unchangeableness of God is often asserted in the Scriptures, and in Malachi He most emphatically says, "For I am the LORD, I change not." We are also assured in Doctrine and Covenants, sec. 30, that "the works, and the designs, and the purposes of God cannot be frustrated, neither can they come to naught; for God doth not walk in crooked paths, neither doth he turn to the right hand nor to the left, neither doth he vary from that which he hath said, therefore his paths are straight, and his course is one eternal round." The Almighty is a God of Truth, or a being who acts on eternal, unchangeable principles or laws. Therefore the method of creating, peopling, redeeming, and sanctifying this earth must be in the similitude of the plan which has been pursued with other worlds in the eternities which have past. It is evident that truth, and its opposite, or the principles of good and evil, must be co-existent with each other, and that the presence of one has ever been necessary to develop the nature and powers of the other. From this it would appear that all organizations and intelligences must experience the effects of evil in order to understand its opposite, be redeemed by a sacrifice similar to the one made for this earth, and receive purification, sanctification, and final redemption through faith, good works, and obedience

to similar laws and ordinances. Co-existent with the Gods of Eternity, there must have always been personal representatives of evil, or devils for them to subdue, in order that there might be an opposite in all things. Without opposition there can be no progression; without hate, no love; without darkness, no light; without sorrow, no joy; without a hell, no heaven; without devils, no Gods. All things must necessarily work out the designs of the Almighty, and increase His glory, exaltation, and power.

We will not attempt here to dwell on the infinitude of the past, or to fathom the mysteries of a continuation of great centres of influence succeeding each other in the rounds of eternal progress, but content ourselves with what appears evident from revelation, reason, and experience. These are sufficient to guide man in the way of eternal life.

Not only do the Old and New Testament, and other ancient and modern revelations through the Holy Priesthood assert this fact, but mankind of every grade, color, nation, and religion, whether Christian, Jew, Mahomedan, or Pagan, all believe in leading personages or influences which are the sources of good and evil. One of these is God the Father, Michael, or Adam, whose loins the earth is peopled, and who is now labouring for the redemption of his

children. The great captain of evil is Satan, formerly Lucifer, but now a fallen "Son of the Morning," who with his followers are diligently labouring to destroy the works of God by reducing them to a like condition with themselves.

We will now notice some of the leading characteristics of these two personages, and the fundamental principles which govern their operations. The number of the human family who do not believe in a God, or Supreme controlling intelligence of some sort, is small. Of the two great divisions of men, Christian and Pagan, the latter have the most rational idea of the form and appearance of the Deity, and the one which most nearly conforms to what is said of Him in the Bible. While the various Christian sects of the day believe Him to be the most perfect nonentity, without body, parts, or passions, or without any of the characteristics of other intelligent organizations, the Pagans believe that He has form, limbs, and features, and hence they worship images, or natural objects, instead of some imaginary nonentity. The Bible most positively asserts that God made man in His own image and likeness; consequently they must resemble each other in form, limbs, features, the general configuration and appearance of an organized body. We learn further from the same book that the Lord loved Jacob and hated Esau, that His anger was kindled against Israel, that He talked with Adam, Noah, and Moses, and eat meat with Abraham.

God is not only the fountain of life, light, and knowledge, and the embodiment of every quality which makes up greatness, goodness, power, and majesty, but He has the most thorough and complete practical knowledge of everything pertaining to this earth, from the foundation through all its grand superstructure, including every individual organization which exists upon it, and the laws which govern them all in their numerous spheres. He understands the relative positions, bearings, and influences which exist between the earth and the planetary worlds, and systems which surround them. He understands the number, and nature, the beginning, object, and end of all things; for He belonged to the council in which the plans of creation were devised, and has practically assisted to carry them out in their details. He knew the spirits of men before they came here, and the great

object to be accomplished in their union with mortal bodies. He comprehends the origin and effects of all the imperfections, trials, and afflictions, and the full extent and power of all the evil, with which man has to combat in his low estate. He has learned all these things by thorough practical experience, by handling, suffering, and realizing them, even as His creatures now do, therefore He has had hands to labour, a body to suffer, a spirit to be chastened, and a soul to appreciate. He has had evil in every form to contend with, temptations to resist, desires, passions, and propensities to subdue and overcome. He has had death to suffer and to conquer, a resurrection to rejoice in, and has been added upon with celestial power and glory. This is the God with whom we have to do, and who stands at our head to do battle with the powers of darkness, and assist us, His children, to overcome, that we may receive a like glory with Himself, and live in His presence.

As God is the fountain of life, light, increase, and intelligence, Satan is directly the opposite, and therefore the origin of death, darkness, ignorance, and disorganization. God organizes or creates, and Satan labours to destroy His works. God is a being of tabernacle, while Satan and his followers have forfeited their right to any. While the Lord has seen fit to reveal much concerning Himself that is glorious and exalting, He has made known to man but comparatively little of the real position, power, and designs of Satan, the extent of his authority, or the definite results of his operations in the great economy of creation. Without Satan, the creations of God would be incomplete. It is evident from the little which has been revealed, and the course which they pursue, that mankind in general have but a very limited conception of his position or power. In the first place he must have had great influence in heaven in order to draw a third part of them into rebellion. We may form some conception of this immense army of spirits who formed one-third part of the hosts of heaven, and who do Satan's bidding, when we take into consideration the myriads which make up the other two-thirds who have already taken tabernacles on the earth, and who are in all probability destined to do so in future.

Surely Satan is not wanting in an abundance of agents to work evil, to mar-

the beautiful creations of God, to surround men with temptations, and watch them by night and by day. When we take into consideration that there are so many devoted to his service that they need but little attention, innumerable indeed must be the hosts that can be brought to bear upon the few who are determined to oppose his power and serve the God of heaven.

These fallen spirits, having forfeited their right to have tabernacles of their own, have power to enter into and operate through other tabernacles, not only of men, but of beasts, birds, and creeping things.

There are some passages of Scripture which will give us some idea of the high position and influence held and exercised by Lucifer. We read in Jude 9, "Yet Michael the archangel, when contending with the devil he disputed about the body of Moses, durst not bring against him a railing accusation, but said, *The Lord rebuke thee.*"

Before leaving this part of our subject, we will add, that in reviewing it, it is evident that the mission of Satan on the earth is a necessary one, that he has been especially raised up to fill the place which he now occupies, that the great plan for the redemption and exaltation of man could not have existed according to the order of creation without him, and that he is one of those dignitaries against whom men should not bring a railing accusation, lest they partake of his spirit.

The whole life of man is a continual struggle against the powers of death. It is this warfare, this effort of the spirit and body to cling together in opposition to the principles of dissolution, which causes the pain and affliction which men are heirs to. The organization of man is the battle ground where the powers of life and death contend for the mastery. Death will be overcome in proportion as man obtains a knowledge of, and practises, the principles of life. In these days of ignorance, no considerable knowledge of these principles can be obtained, except by revelation through the Priesthood.

As soon as the matured spirit is ushered into its new sphere of action in its infant tabernacle, the spirits of darkness are on hand to commence their operations, in order to prevent if possible its attaining the object of its creation. They go to work under the evil impulses within them to

introduce into the system artificial and injurious desires and habits, and through life they are continually drawing men into evil, by leading their minds into false conceptions of right and wrong, by prompting them to indulge in delusive hopes, until they are caught in a snare, or by surrounding them with a chain of circumstances which will induce them if possible to break the laws of life.

Satan tempted Eve to partake of the forbidden fruit, by assuring her that she should not surely die, and that she should receive an increase of knowledge. This proved in part to be true, for on eating she discovered that she had done that which would give her a practical knowledge of the elements of death, which from that time operated in her against those of life. Adam, in order to fulfil the first great commandment to "increase and multiply," which he could not do if separated from Eve, partook also of the fruit, and went with her from the garden. This enables men to exercise their free agency in choosing which they will serve, for they must obey the influences of one or the other. Man cannot remain neutral. If that were possible he would become a mere cypher, cease to progress, and never attain the object of his creation. He must choose between good and evil, and his free agency consists in the privilege of choosing either, or, in the language of the Prophet Brigham, "Life and death are set before us, and we are at liberty to choose which we will."

Much has been said upon this subject of free agency, and volumes have been written by learned commentators and pious divines; but it simply resolves itself into this, that good and evil are placed before men, and they are left free to choose between them. Every intelligent organization in the universe must have its opposite, by which its adaptation to the object of its creation may be compared, and by which its progress towards that object, or departure therefrom, may be noted, on the same principle that anything in motion is only known to be so from a change in its relative position with other objects. Without this principle of free agency, the powers and capacities of men would remain inactive, and there would be nothing to stimulate to progress and improvement. It was the blessings arising from these three principles—good, evil, and free agency, which

came Adam and Eve to rejoice, as stated in the revelation given to Moses, Pearl of Great Price, page 15—"And in that day Adam blessed God and was filled, and began to prophesy concerning all the families of the earth: *Blessed be the name of God for my transgression, for in this life I shall have joy, and again in my flesh I shall see God.*" And Eve, his wife, heard all these things and was glad, saying, *Were it not for our transgression we should never have had seed, and should never have known good and evil, and the joy of our redemption, and the eternal life which God giveth unto all the obedient.*"

The sectarian world, in their ignorance and pious enthusiasm, are continually mourning and complaining about the course pursued by our First Parents, and condemning them for an act without which men could not have existed, and received the joys of salvation and redemption through the death and resurrection of Christ. On the contrary, they should rejoice with Father Adam and Mother Eve, that they partook of the tree of knowledge of good and evil, and thus opened the way for their children to obtain exaltation and eternal lives. Man-kind, in keeping the commandment "*Honour thy father and mother,*" should begin with their first progenitors, to whom *more abundant honour* is due for taking the first great step through which their children may realize the glories of a celestial kingdom, and receive an inheritance among the Gods of eternity.

In order to understand better the real position in which man is placed in this world, we will take into consideration his position before he came here, and why it was necessary for him to come here. Sufficient has been revealed to show conclusively that men were free agents in their first estate, as well as in this, or that they had the privilege then, the same as now, of following either Lucifer or Michael. There is no principle on which the rebellion or obedience of the hosts of heaven can be accounted for, except on that of voluntary action. Without the privilege of choosing or refusing, there can be no sin. The consequences of this rebellion in heaven were, that those engaged in it were condemned to remain in their spiritual estate without the power of increase, while the obedient were progressing through their second estate. Their forlorn

condition is forcibly described in the sixth verse of the Epistle of Jude—"And the angels which kept not their first estate, but left their own habitation, they hath reserved in everlasting chains under darkness unto the judgment of the great day." The fact that those reserved in everlasting chains under darkness kept not their first estate, shows that the privilege of coming here was founded on certain conditions, that they broke them, and that those who have the privilege of taking tabernacles fulfilled them. Therefore the very fact of spirits entering the second estate at all, is conclusive evidence that they leave the first free from sin or transgression.

It cannot be inferred from this that spirits come here prepared to occupy equal positions in this world. See Pearl of Great Price, page 25—"Now the Lord had shewn unto me Abraham the intelligencies that were organized before the world was; and among all these there were many of the noble and great ones; and God saw these souls that they were good, and he stood in the midst of them, and he said: *These I will make my rulers; for he stood among those that were spirits, and he saw that they were good.*"

The Lord, in a revelation to the Prophet Joseph Smith and others, has plainly stated the reason why it was necessary for spirits to come here and take tabernacles. This reason may be found in Doctrine and Covenants, page 246—"The elements are eternal, and spirit and element inseparably connected, receiving a fulness of joy; and when separated man cannot receive a fulness of joy." Man-kind cannot be stationary, they must move forward, or retrograde, and either implies continual change, as says the Prophet Brigham—"You may explore all the eternities that have been, were it possible, then come to that which we now understand according to the principles of natural philosophy, and where is there an element, an individual living thing, an organized body, of whatever nature that continues as it is. **IT CANNOT BE FOUND.**"

After the intelligencies in the bosom of the Father had fulfilled the law of their spiritual existence they could progress no further without some change in their organization and sphere of action, and their Creator, in obedience to the eternal law of increase by which He increases His own

glory by adding to that of His children, had a habitation prepared for them of grosser material than spiritual element, and gave each a portion of it fitted up to be a dwelling place for the spirit. This union of organizations, or of spiritual with mortal bodies, is placed under certain laws founded in truth and righteousness, which if it will faithfully keep, it will be for ever united under a still higher law, and in a more exalted sphere, after going through the changes of a dissolution of the mortal organization, and being quickened again, and filled with the element of eternal life. Birth, death, and the resurrection are very important eras in the progress of intelligences. The changes which may take place after the resurrection are not revealed, but reasoning from analogy there never can be an end of them in the eternal rounds of progress. The body of man is the foundation or beginning of his kingdom, the first change

from a primitive state, the beginning of an organization in the image of, and like unto, the Gods, in which is the germ of eternal lives. How important then that it be strengthened and perfected in right principles, that the superstructure may be complete in all its parts. Just in proportion as man improves upon and perfects his body through the will of his spirit, which must be controlled by the dictates of revelation from God, will he prove himself worthy of having added unto him pure and virtuous women as wives, and through them other bodies in the image, and the offspring, of his own. In fact, spirit and body united is the only medium through which "a fulness of joy" can be received, or exaltation and eternal lives be realized. The measure of these blessings to every man will be the degree of perfection which he attains to in keeping the laws which were ordained to govern him in this temporal estate.

History of Joseph Smith.

(Continued from page 776.)

[May 1840.]

Tuesday, 26th, Elder J. Taylor, and 27th Elder Kimball arrived at Manchester. The committee on the Hymn Book commenced, and continued selecting hymns until the 30th, when Elders Young, Kimball, and Taylor went to Liverpool, and preached on Sunday the 31st.

Wednesday, 27th. Bishop Edward Partridge died at Nauvoo, aged 46 years. He lost his life in consequence of the Missouri persecutions, and he is one of that number whose blood will be required at their hands. His daughter Harriet Pamela died on the 16th of May, aged 19 years.

The first Number of "The Latter-day Saints' Millennial Star" was issued at Manchester, in pamphlet form of twenty-four pages. Edited by P. P. Pratt. Sixpence. Office, 149, Oldham Road.

Monday, June 1, 1840. The Saints have already erected about two hundred and fifty houses at Nauvoo, mostly block houses, a few framed, and many more in lively operation.

The Gospel is spreading through the States, Canada, England, Scotland, and other places, with great rapidity.

Elders Young and Kimball were engaged in blessing the brethren who were about to sail for America.

Wednesday, 3rd. Elders Young and Taylor visited the printers in Liverpool, and Elder Young preached on Sunday.

Saturday, 6th. Elder John Moon and a company of forty Saints, to wit, Hugh Moon, their mother, and seven others of her family, Henry Moon (uncle of John Moon), Henry Moon, Francis Moon, William Sutton, William Silgraves, Richard Eaves, Thomas Moss, Henry Moore, Nancy Ashworth, Richard Ainscough, and families, sailed in the ship Britannia from Liverpool for New York, being the first Saints that have sailed from England for Zion.

Monday, 8th. Elders Young and Taylor visited Cheshire, and on Tuesday, Manchester, and continued to select

Elder Young dreamed of his family in health and want, also of the Church, and

people, and of a contention between two small companies in the west, one north, the other south—the north prevailing from time to time.

Sunday, 14th.

Minutes of the Conference held at the Gadfield Elm Chapel, in Worcestershire, England, June 14th, 1840.

The Preachers and members of the Bran Green and Gadfield Elm Branch of the Froomes Hill Circuit, of the United Brethren, met at the Gadfield Elm Chapel, Worcestershire, June 14th, 1840, pursuant to previous notice, when the meeting was called to order by Elder Thomas Kington. Elder Willard Richards was chosen President, and Elder Daniel Browett, Clerk for the meeting. The meeting opened by prayer by Elder W. Woodruff. Remarks were then made by the President respecting the business of the day, and the necessary changes which must take place.

It was then moved by Elder T. Kington, seconded by Elder Daniel Browett, that this meeting be hereafter known by the name of the "Bran Green and Gadfield Elm Conference of the Church of Jesus Christ of Latter-day Saints," organized and established by the will and commandment of God, in the United States of America, on the 8th day of April, A.D. 1830, this being the eighth day of the third month of the eleventh year of the rise of the Church. Carried unanimously.

[This motion was permitted to accommodate the feelings of the Conference, who had all recently been baptized, but there is no such principle in existence, as to transform a Church or Conference of the world, into a Church or Conference of Christ's fold by vote.]

Moved by Elder W. Woodruff, seconded by Elder T. Kington, that William Jenkins be ordained an Elder; and William Coleman, Joseph Firkins, William Pitt, and Robert Harris be ordained to office of Priest; and that George Burton, James Palmer, and William Loveridge, be ordained Teachers; carried unanimously. Ordained under the hands of Elders Richards and Woodruff.

Moved by Elder Kington, seconded by Elder Woodruff, that

Robert Clift, Priest, have the care of the Church at Dymock.

James Palmer, Priest,	do.	Kilcott.
John Hill, Priest,	do.	Twigworth.
William Coleman, Priest,	do.	Bran Green.
Thomas Brooks, Priest,	do.	Ryton.
John Smith, Priest,	do.	Lime Street.
Charles Hayes, Priest,	do.	Deerhurst.
Thomas Smith, Priest, Asst.	do.	Deerhurst.
John Vernon, Priest,	do.	Apperley.
Wm. Baylies, Priest, Asst.	do.	Apperley.

John Arlick, Priest,	do.	Norton.
John Spies, Priest,	do.	Leigh.
John Davis, Priest, Asst.	do.	Leigh.
Thomas Oakley, Priest,	do.	Gadfield Elm.

And that Elder Daniel Browett take charge of the Churches on the south, and Elder William Jenkins on the north side, of the river Severn. Carried unanimously.

Moved by Elder Woodruff, and seconded by Elder Richards, that Elder Thomas Kington be the Presiding Elder over this Conference; carried. Meeting adjourned to two o'clock.

Met at two o'clock according to adjournment, and administered the Sacrament to a large congregation of Saints, accompanied by many observations on various subjects by the President. Ten members were confirmed under the hands of Elders Woodruff and Kington. Remarks were made by the President respecting the "blessing of children." Seven children were then blessed under the hands of Elders Woodruff and Kington.

Moved by Elder Kington, seconded by Elder Woodruff, that Elder Daniel Browett represent this Conference to the General Conference, at Manchester, on the 8th day of July next; carried. Moved and carried, that the Clerk present to the Presiding Elder, T. Kington, for safe keeping, a copy of the minutes of this Conference, and also to the General Conference.

The above minutes were then read and adopted, article by article, when it was moved by the President, and seconded by Elder Woodruff, that this Conference be adjourned to the 13th day of September next at this place; carried unanimously.

Conference closed by prayer. After which the Elders and officers present met in Council, and voted unanimously to establish a weekly Council of the officers of said Conference, to be held alternately on the south and north sides of the river Severn, to commence at Leigh on the 28th inst.; and organized the same by appointing Elder Daniel Browett, President, and John Hill, Priest, Clerk, on the south side of the river; and also on the north side, by appointing Elder William Jenkins, President, and John Smith, Priest, Clerk; to assemble on the 3rd of July next, at Turkey Hall.

After passing many other votes of minor importance, accompanied by much instruction from Elders Richards and Woodruff, touching the duties of the several officers in their relations to each other, and the Church, the Council adjourned. And it is worthy of remark, that no dissenting vote or voice was seen or heard during the day, either in Conference or Council.

WILLARD RICHARDS, President.

DANIEL BROWETT, Clerk.

Thursday, 18th.

Copy of a Memorial from Joseph Smith, junior, to the High Council of the Church of Jesus Christ of Latter-day Saints.

June 18, 1840.

The Memorial of Joseph Smith, junior, respectfully represents— That after the Church of Jesus Christ had been inhumanly as well as unconstitutionally expelled from their homes which they had secured to themselves in the State of Missouri, they found a resting-place in the State of Illinois, although very much scattered and at considerable distance from each other. That after the escape of your memorialist from his enemies, he (under the direction of the authorities of the Church) took such steps as has secured to the Church the present locations, viz., the town plot of Nauvoo and lands in the Iowa Territory. That in order to secure said locations, your memorialist had to become responsible for the payment of the same, and had to use considerable exertion in order to commence a settlement, and a place of gathering for the Saints; knowing from the genius of the constitution of the Church, and for the well-being of the Saints, it was necessary so that the constituted authorities of the Church might assemble together to act or to legislate for the good of the whole Society, and that the Saints might enjoy those privileges which they could not, by being scattered so wide apart, induced your memorialist to exert himself to the utmost in order to bring about an object so necessary and so desirable to the Saints at large.

That under the then existing circumstances, your memorialist had necessarily to engage in the temporalities of the Church, which he has had to attend to the present time. That your memorialist feels it a duty which he owes to God as well as to the Church, to give his attention more particularly to those things connected with the spiritual welfare of the Saints, (which have now become a great people,) so that they may be built up in their most holy faith, and go on to perfection.

That the Church having erected an office where he can attend to the affairs of the Church without distraction, he thinks and verily believes that the time has now come, when he should devote himself exclusively to those things which relate to the spiritualities of the Church, and commence the

work of translating the Egyptian Records, the Bible, and wait upon the Lord for such Revelations as may be suited to the condition and circumstances of the Church.

And in order that he may be enabled to attend to those things, prays your Honourable Body will relieve him from the anxiety and trouble necessarily attendant on business transactions, by appointing some one to take charge of the City Plot, and attend to the business transactions which have heretofore rested upon your memorialist. That should your Honours deem it proper to do so, your memorialist would respectfully suggest that he would have no means of support whatever, and therefore would request that some one might be appointed to see that all his necessary wants may be provided for, as well as sufficient means or appropriations for a Clerk or Clerks, which he may require to aid him in his important work.

Your memorialist would further represent, that as Elder H. G. Sherwood is conversant with the affairs of the City Plot, thinks that he would be a suitable person to act as Clerk in that business, and attend to the disposing of the remaining lots, &c.

Your memorialist would take this opportunity of congratulating your Honourable Body on the peace and harmony which exists in the Church, and for the good feelings which seem to be manifest by all the Saints, and hopes that inasmuch as we devote ourselves for the good of the Church, and the spread of the kingdom, that the choicest blessings of heaven will be poured upon us, and that the glory of the Lord will overshadow the inheritances of the Saints.

JOSEPH SMITH, junior.

Saturday, 20th. Proceedings of the High Council on the foregoing memorial.

The Council relieved President Joseph Smith, junior, according to his request in the memorial, and appointed H. G. Sherwood to take charge of the City Plot and act as Clerk in that business, and also to attend to the disposing of the remaining lots, and the business transactions which have rested upon him. Alanson Ripley was appointed steward to see that all the necessary wants of the First Presidency be supplied, as well as to provide sufficient means or appropriations for a Clerk or Clerks to aid President Joseph Smith, junior, in his important work.

HOSHA STOUT, Clerk.

(To be continued.)

An inveterate bachelor being asked by a sentimental young miss why he did not secure some fond one's company in his voyage on the ocean of life, replied, "I would if I were sure such an ocean would be pacific."

The Latter-day Saints' Millennial Star.

SATURDAY, DECEMBER 15, 1856.

PROFESSOR PRATT'S DISCOVERY.—We publish in this Number of the *Star* an account of Elder O. Pratt's discovery of the law of planetary rotation. To the generality of our readers, so abstruse a subject may not be of much interest, any farther than as they take an interest in the progress of science and general education in Utah. Professor Pratt is a self-educated man, and, like many of his brethren, he has had to struggle on through poverty, sustain his family, preach the Gospel, and attend to the varied duties of his calling in the Priesthood. But amidst all this, he has been a most devoted student of the sciences of mathematics and astronomy. One of the results of his labours is the discovery of this law, which will rank him with such men as Kepler, Laplace, and others by whom have been discovered, from time to time, some of the general laws which govern the planetary worlds. This should indicate to the world, that the Saints do not intend to be behind them in anything. Their rapid progress in the arts and sciences—their system of theology, based on the revelations of heaven—their improved moral and social relations, and thorough system of general education, will soon place them in the van of all other people. The day is not far distant when they will out-strip the world in everything that is great, good, and exalted.

UTAH NEWS.—The interesting letter from Elder G. A. Smith, inserted elsewhere, gives a copious summary of the news from Utah. A few other items we have gleaned from the *Deseret News*.

Elders Charles Smith, John Mayer, John W. Coward, Benjamin Brown, and W. G. McMullin arrived in the Valley, in advance of their companies, about Sept. 1st. Elders N. V. Jones and W. Fotheringham arrived in San Francisco on the 9th of July, en route for Utah. They were 4 months and 5 days in going from Calcutta, stopping 10 days in Singapore, 5 in Macao, and 10 in Hong Kong, from which they reached San Francisco in 56 days. They expected to go through to the Valley on the northern route, in company with Bishop J. L. Heywood.

On Monday Sept. 3rd, brother David Charles Williams, while employed in carrying away lumber from the circular saw of Woolley, Snow and Co., Little Cottonwood canyon, accidentally let the board, of which he had hold, touch the top of the saw while in rapid motion, tending to project the board forward with great force, but he holding too firmly to his grasp, was thrown directly upon the saw, which carried him over its top and threw him a distance of some eighteen feet, cutting and mangling him in the most shocking manner. He survived about twenty minutes. He has left a wife to lament his early death, and many friends in his native country, Wales.

Married, by Bishop Silas Richards, in Union, U.T., Sept. 16, Mr. Samuel Whitaker and Miss Sarah Ann Betson, both from England.

DEPARTURE.—The ship *Emerald Isle*, Captain G. P. Cornish, cleared on the 28th ult., and sailed on the 30th for New York, with 349 souls of the Saints on board, under the Presidency of Elder P. C. Merrill, assisted by Elders Joseph France and T. B. H. Stenhouse.

ARRIVAL.—Elder George P. Waugh arrived at Liverpool Nov. 30 from Canada, via New York. He left New York Oct. 30, per ship *Yorkshire*.

THE continuation of the article entitled "Joseph Smith, the Prophet" is postponed, from untoward circumstances, until next week.

Law of Planetary Rotation.

DISCOVERED BY PROFESSOR ORSON PRAIT.

To the Editor of the *Millennial Star*.

Dear Sir,—Permit me to announce to the world, through your valuable paper, an astronomical discovery, made by me on the eleventh day of November, 1854. I allude to a law governing planetary rotation. Telescopic observation reveals to us the fact that many of the bodies of the solar system, not only have a progressive velocity in their orbits, but a rotative motion upon their axis. Heretofore, the only means known to astronomers, by which to determine the exact period of a planet's rotation, has been a careful observation of the movements of spots upon its surface. For instance, spots are discerned on the eastern limb of a planet's disc, which, instead of remaining stationary, gradually move across the disc in a westerly direction, disappear for a few hours at the western limb, and again re-appear in their former position on the eastern limb. These spots are believed to be portions of the surface of a planet darker than the adjacent parts, and carried around by a rotation of the planet on its own axis from west to east.

By such observation, the period of the rotation of the planet Mars has been determined to be 24h. 37m. 23s. mean solar time; Jupiter's period, 9h. 54m. 12s.; and Saturn's period, 10h. 29m. 17s. Mercury and Venus are situated so near the sun that it is extremely difficult to distinctly discern spots upon their surfaces. It is believed, however, by some astronomers that their observations are sufficiently exact to assign to Mercury a rotative period of about 24h. 5m., and to Venus a period of 23h. 21m. 21s. It is still maintained by some eminent observers that there is a small degree of uncertainty remaining as to the rotative periods of Mercury and Venus. Uranus is supposed by some observers to rotate on its axis in 9h. 30m.; but this planet is so far distant from us that it is generally believed that the present powers of the telescope are incapable of revealing any spots upon its surface sufficiently distinct to determine whether it has a rotation or not. Whether the asteroids and the planet Neptune rotate, the astronomical instruments of the present day are utterly inadequate to determine.

Do all the planets of the solar system rotate? Observation has, as yet, been entirely unable to answer this question. It is supposed from analogy that rotation is as extended in its operations as the progressive motions of planets in their orbits—that every planet turns upon its axis, producing the agreeable alternations of light and darkness, day and night. But how to demonstrate this analogical supposition—how to ascertain the periods of rotation of such planets as are beyond the reach of observation, has been a problem unsolved by the astronomical world.

Many eminent and distinguished astronomers have eagerly sought after some law, connecting the rotative periods of the planets with some known data of the solar system, such as their distances from the sun—their orbital velocities—their masses, &c.; but all their laborious researches to develope such law have not been crowned with success—the law of planetary rotation has eluded their grasp.

Firmly believing, from my early youth, that the diurnal periods of the planets were the results of some hidden law, I have endeavoured, at different times, to discover the same, so as to determine the periods of rotation by calculation instead of observation. After many fruitless researches in regard to the original causes of planetary motion, I was led by the indications of certain hypotheses to seek for the law of rotation connected with the masses and diameters of the planets, or, in other words, with their densities. These investigations resulted in the development of the following beautiful law:—

THE CUBE ROOTS OF THE DENSITIES OF THE PLANETS ARE AS THE SQUARE ROOTS OF THEIR PERIODS OF ROTATION.

Or, which amounts to the same thing—THE SQUARES OF THE CUBE ROOTS OF THE DENSITIES OF THE PLANETS ARE AS THEIR PERIODS OF ROTATION.

But as the densities of globes are proportional to their masses or quantities of matter, divided by their volumes or by the cubes of their diameters, it follows that the rotation of the planets, considered as spheres, is proportional to their masses and diameters. The law, therefore, may be expressed in terms of the masses and diameters, as follows:—

THE SQUARES OF THE CUBE ROOTS OF THE MASSES OF THE PLANETS DIVIDED BY THE SQUARES OF THEIR DIAMETERS ARE AS THEIR PERIODS OF ROTATION.

To illustrate the correctness of this law, I will give the following examples:—

Example 1. Given the mass of the earth equal to 1; its equatorial diameter, 7925.5 miles; its period of rotation, 23h. 56m. 4.090475s. mean solar time, which is equal to one absolute sidereal day; also the mass of the planet Mercury equal to 0.0627694 and its diameter 3140 miles; it is required to find the period of Mercury's rotation.

$$\frac{(1)^{\frac{2}{3}}}{(7925.5)^2} : \frac{(0.0627694)^{\frac{2}{3}}}{(3140)^2} :: 23h. 56m. 4.090475s. : 24h. 5m.$$

Example 2. Given the mass of Venus equal to 0.9043346; its diameter 7800 miles; and the mass, diameter, and rotative period of the earth, as in the first example. Required the period of the rotation of Venus.

$$\frac{(1)^{\frac{2}{3}}}{(7925.5)^2} : \frac{(0.9043346)^{\frac{2}{3}}}{(7800)^2} :: 23h. 56m. 4.090475s. : 23h. 21m. 21s.$$

Example 3. Given the mass of Mars equal to 0.145337; its diameter, 4108.26 miles; and the mass, diameter, and rotation of the earth, as in the first example. Required the period of the rotation of Mars.

$$\frac{(1)^{\frac{2}{3}}}{(7925.5)^2} : \frac{(0.145337)^{\frac{2}{3}}}{(4108.26)^2} :: 23h. 56m. 4.090475s. : 24h. 37m. 23s.$$

Example 4. Given the mass of Jupiter equal to 371.7547; its diameter 88592.7 miles; those of the earth as in the former examples. Required the period of the rotation of Jupiter.

$$\frac{(1)^{\frac{2}{3}}}{(7925.5)^2} : \frac{(371.7547)^{\frac{2}{3}}}{(88592.7)^2} :: 23h. 56m. 4.090475s. : 9h. 54m. 12s.$$

Example 5. Given the mass of Saturn and its rings equal to 289.0281; its diameter, 79160 miles; those of the earth as in the former examples. Required the period of the rotation of Saturn.

$$\frac{(1)^{\frac{2}{3}}}{(7925.5)^2} : \frac{(289.0281)^{\frac{2}{3}}}{(79160)^2} :: 23h. 56m. 4.090475s. : 10h. 29m. 17s.$$

Example 6. Given the mass of Uranus equal to 20.625488; its diameter 34500 miles; those of the earth as in the former examples. Required the period of the rotation of Uranus.

$$\frac{(1)^{\frac{2}{3}}}{(7925.5)^2} : \frac{(20.625488)^{\frac{2}{3}}}{(34500)^2} :: 23h. 56m. 4.090475s. : 9h. 30m.$$

Example 7. Given the mass of Neptune equal to 26.87671; its diameter, 41500 miles; those of the earth as in the former examples. Required the period of the rotation of Neptune.

$$\frac{(1)^{\frac{2}{3}}}{(7925.5)^2} : \frac{(26.87671)^{\frac{2}{3}}}{(41500)^2} :: 23h. 56m. 4.090475s. : 7h. 49m. 57s.$$

Example 8. Given the mass of Neptune equal to 26.87671; its diameter, 37500 miles; those of the earth remaining as in the former examples. Required the period of the rotation of Neptune.

$$\frac{(1)^{\frac{2}{3}}}{(7925.5)^3} : \frac{(26.87671)^{\frac{2}{3}}}{(37500)^3} :: 23\text{h. } 56\text{m. } 4.090476\text{s.} : 9\text{h. } 35\text{m. } 32\text{s.}$$

If in any of these examples the mass be divided by the cube of the diameter, the quotient will be the density of the planet. And if the density of the earth be taken as unity or 1, the densities of the other planets, deduced from the data given in the foregoing examples, will be as in the second column of the following table:—

Name of Planet.	Densities (the earth's being 1.)	Masses (the earth's being 1.)	Diameters in miles.	Diameters (the earth's being 1.)	Periods of rotation in absolute sidereal days (the earth's being 1.)
Mercury	1.00934	0.9637694	3140	0.3961895	1.00622
Venus... ..	0.96395629	0.9043346	7800	0.984165	0.975824
Earth	1.000000	1.0000000	7925.5	1.000000	1.000000
Mars	1.04346	0.145837	4108.26	0.51836	1.02877
Jupiter	0.26616	371.7547	88592.7	11.17818	0.41377
Saturn and rings	0.29007	289.0281	79160	9.988013	0.43820
Uranus	0.25005	20.625488	34500	4.353038	0.39692
Neptune	0.1872026	26.87671	41500	5.2362627	0.327246
Neptune	0.253715	26.87671	37500	4.7315627	0.400771

If in the examples given above, the densities in the second column of the table be substituted for the masses and diameters, and the absolute sidereal period of the earth's rotation be considered as unity or 1, the calculations will be greatly shortened, for then the squares of the cube roots of the densities would be equal to the periods of rotation, expressed in absolute sidereal days, as in the last column of the above table.

Example. If the density of Mars be 1.04346, what will be its period of rotation?

$$(1.04346)^{\frac{2}{3}} = 1.02877 \text{ sidereal days, which is the answer.}$$

The ratio of one mean solar day to one absolute sidereal day is as 1.00273791 to 1. Therefore, by dividing the sidereal days in the last column of the table by this ratio, the quotient will be solar days, which may be easily reduced to hours, minutes, and seconds, mean solar time.

To express the law of planetary rotation in general algebraical formula, applicable to the periods of the rotation of all the primary planets, let M, D, P , represent respectively the mass, diameter, and rotative period of the earth; and let m, d, p , represent the mass, diameter, and rotative period of any planet, then we will have—

$$\frac{P \cdot D^3 \cdot m^{\frac{2}{3}}}{d^3 \cdot M^{\frac{2}{3}}} = p; \text{ or in terms of the densities and periods, thus—}$$

$$\frac{(\text{Planet's den.})^{\frac{2}{3}} \cdot P}{(\text{Earth's den.})^{\frac{2}{3}}} = p; \text{ or, if the earth's rotative period and density be each taken as unity or 1, then,}$$

$$(\text{Planet's density})^{\frac{2}{3}} = \text{rotative period.}$$

As the rotative periods depend upon the masses and diameters of the planets, any errors entering into these elements by the imperfections of observation will necessa-

may affect the calculated periods of rotation in a proportionate degree. This will be more manifest by referring to the 7th and 8th examples in regard to the mass and diameter of Neptune. The mass which I have adopted in these two examples is that calculated by Professor Struve, from his own observations of the satellite attending the primary. The diameter, 41500 miles, is that given by Sir John Herschel in his "Outlines of Astronomy." The assumed diameter, 87500 miles, in conjunction with the same mass, gives a difference of 1h. 45m. 35s. in the calculated periods of rotation. Many astronomers have adopted 35000 miles for the diameter.

The diameter of Neptune is probably not yet known within several thousand miles, for an error of observation of three tenths of a second of an arc, would at that great distance produce an error of over 4000 miles in the calculated diameter of the planet. The same statement is equally applicable to the determination of the mass. An error of observation on the dimensions of the orbit of Neptune's satellite, though it might be only a small fraction of a second of an arc, yet it would produce a great difference in the calculated mass. We can, therefore, in our calculations, only approximate the true periods of rotation in proportion as observation approximates the true ratio of the masses and diameters of the planets.

There is a great difference in the observations of astronomers from which the mass and diameter of Saturn are computed. Some have adopted 67,000 miles as the diameter; others, 73,000; and others again 79160. Some have adopted the mass much less than we have assigned in the foregoing table. If we take the diameter at 67,000 miles, and the mass at 175.245857, the ratio and the period of rotation will remain the same as in the table.

The renowned French mathematician—Le Verrier, to whose calculations the world are indebted for the discovery of Neptune, has revised the tables containing the elements of the planet Mercury, and has computed its mass much less than formerly received: hence, I have adopted Mercury's mass less than stated in the old tables.

It will be seen by the formula which I have given, that if the rotation is known by observation, the ratio of the mass and diameter can be calculated; and that if any two of the elements are known, the third can be calculated.

The periods of the rotations of the ultra-zodiacal planets or asteroids cannot be calculated until observation shall determine their masses and diameters.

Whether the law of planetary rotation can be extended to the rotative periods of the satellites, attending the four exterior planets of the solar system, is not known. It is supposed by some, from observation, that the periods of the rotation of the satellites are equal to their periods of revolution around their primaries; but this needs confirmation by further observation of greater perfection and accuracy than what the present powers of the telescope seem capable of affording.

From the masses and diameters of the four satellites of Jupiter, as given in Herschel's "Outlines of Astronomy," I find by the application of the law of rotation, the following relative or proportional periods. (Assuming the period of the rotation of the 1st satellite, nearest to the planet, to be equal to unity or 1.)

Jupiter's Proportional periods of satellites, rotation, as calculated.	
1st.	1.000000000
2nd.	1.788478493
3rd.	1.635488852
4th.	1.375555069

If it be true, that the rotative periods of these satellites are equal to the periods of their revolutions around their primaries, then the law does not apparently hold good for these secondary systems, unless the diameters and masses are affected with considerable errors; for instance, if the apparent angular diameter of the 2nd satellite be reduced the one-twentieth of a second of an arc, it would reduce the real diameter 116 miles, which would give a calculated period of rotation, such as should exist in order to correspond precisely with the ratio of the periods of revolution in their orbits. In the cases of the 3rd and 4th satellites, there would have to be a greater correction in order to make the rotative and orbital periods of the same length. A

made of a small fraction of a second of an arc, might easily be made in the apparent angular diameters. Likewise, as the masses are deduced from observations of the minute perturbations which the satellites exercise upon each other, it is evident that a minute error in such observations would give a much greater error in the calculated masses. Therefore, masses and diameters might be assumed, within the limits of unavoidable errors, which would give calculated periods of rotation for the four satellites of the same length as their orbital periods.

This remarkable law, connecting the periods of rotation with the masses and diameters of the planets, appears to point to some more original law of a higher order of generalization. Such was the case in regard to Kepler's law, connecting the orbital periods of the heavenly bodies with their distances from their respective centres of motion. Newton demonstrated Kepler's law to be a necessary result of the more general law of universal gravitation.

Providence may raise up a Newton in our day who shall disclose to us the reason why the cube roots of the densities of the planets are as the square roots of their periods of rotation.

I intend in some future communication, to present an hypothesis which will, if I am not mistaken, account for this curious law obtaining in the solar system.

With the most sincere desire for the development and diffusion of useful knowledge, I subscribe myself your most humble servant,

ORSON PRATT, Senior.

G. S. L. City, Utah Territory, August 4, 1853.

Foreign Correspondence.

DESERET.

Historian's Office,
Great Salt Lake City,
Sep. 30th, 1853.

Elder Franklin D. Richards.

Dear Brother—Elder Erasmus Spow arrived here from St. Louis about half past one a. m., of the 1st inst., after travelling very hard and almost without sleeping for many days. He came with the mail part of the way, but found it was too slow business for him.

On the 2nd inst., the first company of our emigration, under Captain Henley, arrived in good condition. There were 46 wagons and 200 souls. On the same day I was sorry to record the death of the posthumous daughter of the late Dr. Willard Richards, born the 18th of last October. Jennie was a fine healthy girl until the 20th of last July when she was taken sick with the diarrhoea which ended in consumption. She was buried on the 4th beside her father, with whom she is no doubt associated in the world of spirits, though she knew him not in the flesh.

On the 2nd inst., the Utah and Shoshone Indians met in front of the Deseret

store, and after various imposing ceremonies, they entered into a treaty of peace.

Elder Isaac Bullock, Judge of Probate for Green River County, came in on the 4th and reported 50 acres of good wheat at Fort Supply, which would be ready for harvesting on the 10th and there were prospects for a good potatoe crop.

The Eastern mail arrived on the evening of the 5th inst., but we had learnt all the most important news by Elder E. Spow. The second company of our emigration arrived on the 7th inst., consisting principally of Danes, under Captain Noah T. Grayman.

On the 10th inst. there was fresh snow visible on the Twin Peaks, the weather for the previous fortnight having been very hot and sultry, the thermometer frequently reaching 90 degrees in the shade. It is now cool and pleasant, averaging about 75 degrees, with slight frosts occasionally a little before sunrise. We consider the frost has held off remarkably, most of the corn having matured, but the crops are thin, owing to late planting and grasshoppers. There is still a little late wheat yet green, which we hope will ripen before any severe frost comes.

On the 11th inst., the company from Texas, conducted by Elder S. M. Blair, arrived in good condition, although they had suffered considerably and their number had been somewhat lessened by the cholera while on the Missouri. On that day also the remainder of the newly appointed missionaries to the Eastern States and Europe started from here, most of them having left the day before, and would wait for the balance between the mountains. Same day Elders Orson Pratt and Jesse W. Fox started for Green River in order to survey and determine the northern boundary line of this territory, at the point where it crosses that river.

On the 25th inst., the first division of the P. E. Fund company, consisting of 46 wagons, arrived here, led by Elders Ballantyne, Pitt, and Glover. The Nauvoo brass band went out the day before for the purpose of cheering and escorting in their old captain, William Pitt, the first member of that band, and by whom, under the Prophet's direction, it was organized. The company had just got camped between the mountains on the 24th, when they saw the band on horseback, preceded by their large flag, coming down the side of the first mountain towards them. They immediately mustered all the guns in camp, and gave the band a salute in true military style, which was answered by the band in musical cheers on their brass instruments, which resounded through the everlasting hills with notes of joy and gladness. I will leave you to conjecture what was the scene, and what were the feelings of the "b'boys" on meeting their old conductor. I can't describe them. Next day the band headed the company into the city, playing lively music, and when near the camp they played "Home, Sweet Home." President B. Young met the company on Union Square, and gave directions respecting the cattle, &c., belonging to the fund.

On the 28th inst., the fifth company arrived under Captain Moses Thurston, with 33 wagons.

"The Deseret State Horticultural Society" has been organized during this month to encourage the raising of fruits, trees, grain, &c., &c.; it held its first public meeting on the 20th inst., at which there was a most superb exhibition of large, fine, and deliciously flavoured peaches, which were distributed among

the Assembly. The Nauvoo brass band, in their grand orchestral capacity, enlivened the meeting with suitable music. It is truly astonishing to see what fine peaches, apples, plums, &c., have been produced from mere seedlings; and now that the brethren have begun to graft, and otherwise improve the young trees, the future prospects are really gratifying. There is a general movement in the community on the subject, and a large quantity of fruit seeds of all kinds in the course of planting this fall. On the evening of the 24th inst., Elder W. C. Staines brought a basket to the office, containing about five dozen of the most delicious peaches of large size, with which he feasted me and my clerks, along with Elders Carrington (whose health is better) and Elias Smith. These peaches would have graced any eastern market, on account of both size and flavour.

Brother Staines is beautifying his garden, and is erecting a splendid dwelling house on it in the cottage style; the mason work being nearly completed. Judge Elias Smith is also building a splendid dwelling house, the adobe work having risen to the height of 20 feet from the cellar ground, and has to go up 12 feet higher. Secretary A. W. Babbitt is just finishing a fine large house with 18 rooms. The G. S. L. County Court House is progressing fast, the mason work being about half done, and the remainder going up spiritedly, so as to enclose the building this fall. Elder Henry J. Jarvis is also finishing a very fine house. The adobe work on the new Historian's Office was completed ready for the roof, but on the evening of the 27th inst., a strong wind arose from the north, and blew in a few yards of the north gable end, breaking several of the joists inside; the damage however will soon be repaired. President H. C. Kimball has built about 160 rods of lime and gravel stone wall around his gardens, making a beautiful and durable fence. Several contracts have been let on the Big Cottonwood Canal, now constructing for boating granite to the Temple, and quite a considerable number of hands are employed thereon; it is expected that an immense amount of labour-tithing will be applied thereon as soon as the expected fall rains have somewhat softened the ground. At the public works they are now manufacturing splendid cutlery, con-

sisting of Congress knives, swords, spears, &c.; they are also making some very fine locks.

The Endowment House has been opened twice a-week for the last month, for the purposes for which it was built; it is now closed until after Conference.

There is to be a special term of the United States' District Court held here, commencing on the 15th of October next.

I have not been very well for the most of this month, so that I have only been about half the time in the office; but I have been to Provo, and what with preaching, counselling, trimming my apple and peach trees, visiting the sick, selecting candidates whom I could recommend for endowments, inspecting improvements, marrying, confirming, and cutting off, (the latter process having been taken with some who had gone to California, contrary to counsel,) I have been kept quite busy all the time.

I saw your family a day or two since; sister Richards was in good spirits, and your family all well, with the exception of a little complaining with the youngest child. I saw 300lbs. of flour, which had just been landed in the hall, indicating the absence of starvation. I saw a very respectable wood pile in the rear of the house, which sister R. calculates will last till April; shewing that the means of cooking are at hand. I also saw the foundation of a kitchen 22 feet by 16, with the mason work 3 feet high, indicating that a new cooking room was in progress. Also was told of 40 yards of good cloth already woven, and saw the yarn for 25 yards more ready for weaving.*

* If Elder Smith had inquired, Mrs. Richards would have informed him that

all which sufficiently testify that while Franklin is preaching and publishing the Gospel among the nations, his family are using every appliance, with industry and economy, to provide themselves with the necessaries and comforts of life.

Elder Seth M. Blair has opened a splendid merchandize establishment in Reese's old store, and is selling goods as cheap as any house in the city.

Elder John C. L. Smith, the President of Parowan, Bishop P. K. Smith of Cedar City, the Hon. Jesse N. Smith, Representatives for Iron County, and some 25 others from that quarter, have come up to attend Conference. One fourth of the city wall of Parowan is completed 12 feet high, and the residue is in rapid progress.

A new valley has been discovered about 25 miles from Harmony, containing a large quantity of excellent timber; a good mill power, and some excellent land for cultivation. A company has been formed to erect a saw-mill.

Some very fine specimens of cotton have been raised in the Santa Clara, and have been pronounced by Dr. Hurt, an old cotton grower, to be superior to any he ever saw in his life. I enclose you a small specimen.

The bell which was cast by brother Morgan Phelps last spring, from the first iron from the Deseret Iron Works, which was very hard, is now mounted on the Salt Lake House in the city, kept by Mr. Townsend; the sound is nearly equal to that of the best at the public works.

Yours as ever,

GEORGE A. SMITH.

there were 300 yards made by the family during the last year. Ed.

Varieties.

JESUITICAL ACUTENESS.—The best commentary on Newton's *Principia* is written by Jaquier and Le Sueur, two members of the Society of Jesus. This commentary is so simple and complete that it enables a person who has but an imperfect knowledge of mathematics to comprehend and to master the sublime discoveries of Newton. There was, however, a trifling objection to the publication of this commentary. The Pope had, by his decrees, forbidden any one to maintain the doctrines of the motion of the earth. The learned Jesuits disposed of this difficulty very easily. They prefixed a notice to this part of the work, declaring that they bowed with implicit submission to the decision of the Pope that the sun moved round the earth, but that they had been incited by curiosity to show what would have been the case, had it been a truth, instead of a fiction, that the earth moved round the sun. The world laughed and learnt; the Holy See was satisfied and silent.—*Lord John Russell.*